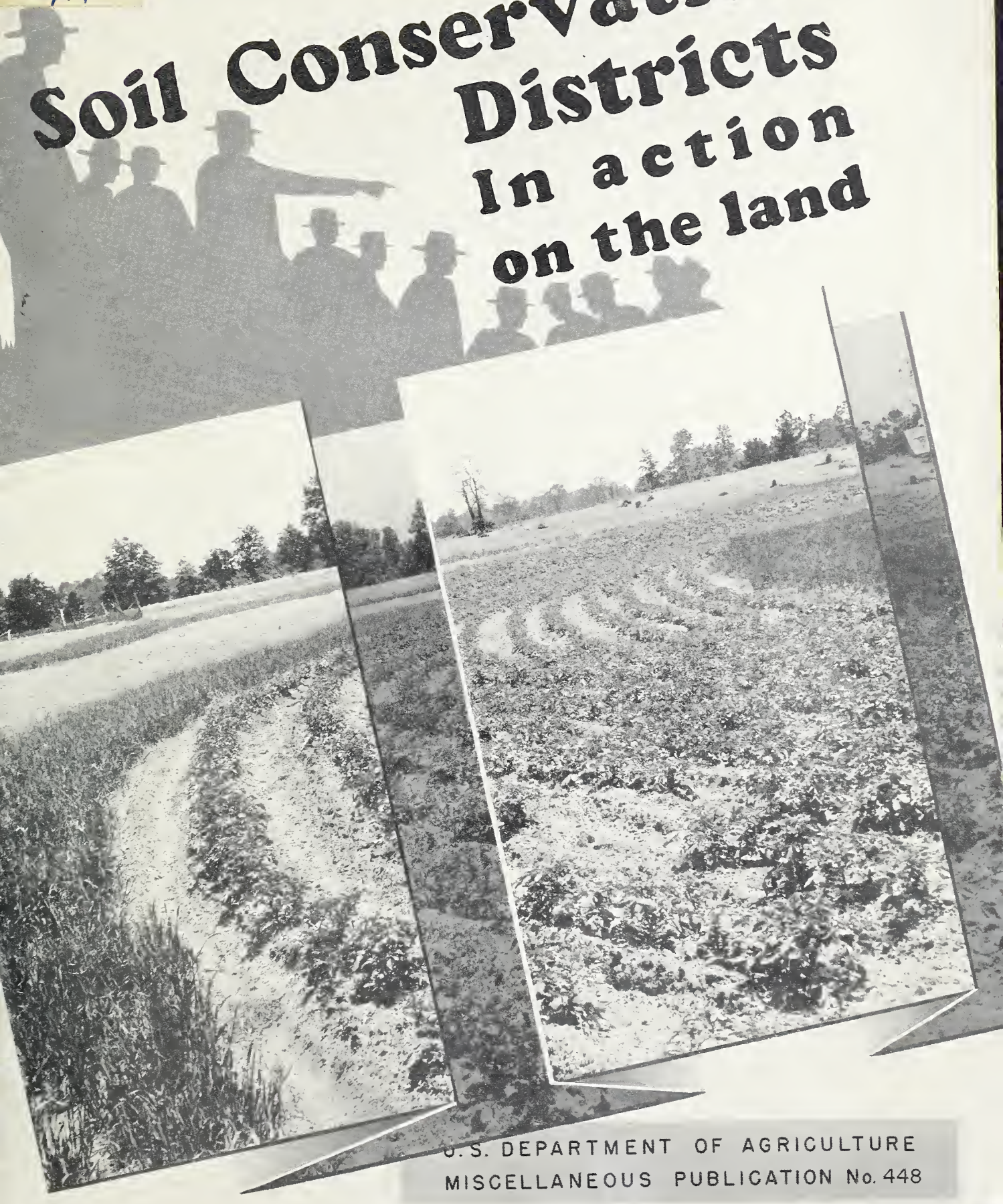
Soil Conservation Districts In action on the land



U. S. DEPARTMENT OF AGRICULTURE
MISCELLANEOUS PUBLICATION No. 448

SOIL CONSERVATION DISTRICTS

In Action on the Land

By GLENN K. RULE

Soil Conservation Service, in Collaboration with District Supervisors

Contents

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FIGURE 1.—Soil conservation districts help spread the adoption of improved practices on the land.

The Idea Spreads

In the last 4 years, 38 States have given their farmers the power to create local units of government for the particular purpose of conserving soil, water, and related resources (fig. 1).

At the close of 1940, as this is written, there are nearly 450 of these local governmental units in existence. They embrace an aggregate area of some 250,000,000 acres; in them live about 1,600,000 farm families. They are known as soil conservation districts.

The growth of these districts—their spread across America—is one of the most remarkable developments in recent agricultural history, and one of the most significant. For soil conservation districts are, in fact, examples of applied democracy. They are formed by farmers and operated by farmers under the authority of State law. They are independent, autonomous units of government, in which the principles of democratic action are put to work in solving problems of mutual concern to the people of a community.

How do they function? What may they do? Are they successful?

To these and many other questions the districts themselves are spelling out an answer. What they *are* doing, day in and day out, is the best evidence of what they *can* do.

The working relationship between them and the various agencies of the local, State, and Federal Government concerned with problems of land use is very close. The district provides local guidance, community initiative, a coordinating mechanism at the grass-roots level through which government effort along many lines can be synthesized and adjusted. State and Federal agencies, in turn, provide technical skill, financial assistance, equipment, and aid in other ways.

Because its program of conservation action is now being projected as fully as possible through the instrumentality of the soil conservation district, the Soil Conservation Service has prepared this report on two typical districts in very different sections of the country.

In what these two districts are doing, the scope and meaning of the soil conservation district as a mechanism of social action in the land use field is to be found.

Farmers in the principal agricultural regions of the United States have become acutely aware of the importance of organizing their communities for active cooperation in soil conservation. The force of public opinion on the farms is indicated by the following statement of a farmer supervisor of a conservation district to the Association of Southern Agricultural Workers at a recent session:

> There is a sort of thinking or philosophy beginning to emerge in our section to the effect that the program of conservation of soil and soil resources is fundamental and constitutes the basic structure on which all * * * programs * * * be built. The efforts of the Farm Security Administration to finance the rehabilitation of a farm family on a tract of land and in a house he can be proud of and call his own will be futile without conservation. The Rural Electrification Administration can expect its great outlay for power lines to be maintained only if the income of the rural areas is supported by conservation. The various individual farm enterprises, such as livestock, poultry, one-variety-cotton communities, special seed development, and others, educated by the Extension Service and Vocational Department, will not become permanent except as supported by conservation. Our social institutions, schools, churches—even the hearth-stone—will survive only in proportion to the progress made in conservation

On the North Plains

Cedar Soil Conservation District, N. Dak.

Wheat farming has failed here, and most of the land must go back to range. Farms and ranches once valued at $20 or more an acre will seldom bring more than $5 an acre now, and the tax situation is catastrophic. Almost in despair, farmers in this watershed tried recently to give their county, and its debt situation, to neighboring counties; but this could not be done. The past 10 years here, in these western areas of the Dakotas, as in many other places on the North Plains, have been hard years indeed (fig. 2).

"If the American people realized the mess things are in they would never have allowed it to happen." The speaker, a Sioux County stockman, continued,

"In my county we have not held a court session in 6 years—no money. If I need the sheriff I must guarantee his mileage expense before he can make the trip. The county superintendent of schools cannot make more than one trip a year to each school in the county—no money. This year (1940) we couldn't find enough money to print the election ballots. We finally found a printer who would do the job for a warrant. If the county can make good on the warrant, the printer will get his money some time, I hope."

All of this is made plain when you examine public records. In 1938, Sioux County collected but $77 in taxes from one township, $190 from another, and only $455.55 from the seven remaining townships that lie within the Cedar District. In 1936 only 6 percent of the taxes were collected, 94 percent were uncollected. The public debt in Sioux County on June 30, 1934, was $63 per capita. By 1937, 49 percent of the population of Sioux County was on relief and 57 percent of the farm families were receiving Resettlement grants. Federal land bank loans within the district average $7 an acre, while seed and feed loans average about $2.50 an acre.

Since about 75 percent of the land in the district is in range land, it is clear that the major portion of the taxes must come from those who raise cattle. The leasing value on range land is nearer 5 cents an acre than 10, yet the tax rates in numerous instances are much higher than the maximum amount that can be obtained through lease.

Farmers have tried to do something about the situation. First they tried to divide their county, giving a piece to four of the surrounding counties in North Dakota. This they found to be impractical, for such a step required a favorable election in each of the four adjoining counties. Then they tried to promote legislation in the State legislature that would permit them to employ a county manager, but this failed to carry.

This is a comparatively new country, and we need not go far back in its agricultural development to find the roots of the present trouble. Prior to 1900 great ranches sprawled over the area. It was a good grass country; it was well watered. In every way, it was admirably adapted to ranching as conducted in that day. The ranchmen prospered in most years, but there were exceptions. The terrible winter of 1886–87 wiped out most of them financially.

The Chicago, Milwaukee, and St. Paul R. R. was pushed westward from Mobridge on the Missouri River in 1907. Encouragement offered by this and other railroads, the Homestead Law, and real estate promoters, induced considerable migration of dry-land farmers from the neighboring States to the East. Apart from a few droughty years, such as 1910 and 1911, all went well with the crop farmers, for the rains seemed to be adequate. More and more sod was broken, and the livestock units of the older

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FIGURE 2.—This abandoned house once provided shelter for a wheat farmer and his family. Wind erosion, dry years, and lack of livestock made it impossible for them to remain.

stockmen were broken up. The crop farmers believed, as did many others at the time, that a smashing plow-up was making the country more humid.

But they completely forgot or ignored the warning of Major Powell, Director of the United States Geological Survey. In a paper read before the North Dakota Constitutional Convention in 1889, he said: "Up and down the temperature of agriculture will rise and fall with the seasons * * * the only practical thing to do is to look the thing squarely in the face and remember that in middle Dakota agriculture will always be liable to meet with failure unless you provide against it. * * * Years will come of abundance, and years will come of disaster. * * * You hug to yourselves the delusion that the climate is changing. * * * You may as well not hope for any improvement in this direction."

But hope they did, and for a time their hopes seemed to be justified. Apart from a few disastrous years the crop farmers in this area succeeded fairly well until about 1917. From then on trouble increased, for yields began to decline. First it was rust, and then the rainfall for a number of years seemed to be on the dry side of the cycle. However, the good prices during the World War enabled many people to make some profit even on low yields.

With the collapse of prices and the continued scarcity of rain most of the farmers were definitely in the clutches of disaster. They went further in debt to break more land to provide an income. Grain cropping continued to expand (fig. 3). The extremely dry years of 1934

and 1936, along with duststorms and insect damages, wiped out most of them financially. Meanwhile, and as cropping expanded, more and more livestock were forced onto ranges that were already overused.

Then came the most staggering blow. Some cattle died, and others became dangerously thin on the depleted ranges. Through Government purchase thousands upon thousands were either condemned and shot, or they were shipped to more favorable areas. Stockmen lost about 90 percent of their cattle.

Many of the formerly overstocked ranges have had a chance to recuperate under rest and a more favorable rainfall in 1938–40. Yet as hopeful as the range prospects now seem, very few of the operators have sufficient credit to get into livestock again for a livelihood.

The foregoing, in general, sketches some of the major problems faced by the citizens of this region of the North Plains. Since this discussion deals specifically with the Cedar Soil Conservation District, it is perhaps best to indicate the boundary lines of this district a bit more precisely before we outline the steps the local people have taken to solve their problems. The lower edge of Sioux County lies on the rolling border between the two Dakotas and just west of the Missouri River. The Cedar district includes a little over 306,880 acres in the western part of Sioux and the southern part of Grant counties (fig. 4).

There is little disagreement in the area about what ought to be done. Nearly everyone feel

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FIGURE 3.—These elevators at McIntosh, S. Dak.—just across the State line from the Cedar district—were built at a time when men thought this was a great wheat country. This storage space is filled during some years now, but usually it is only partly occupied.

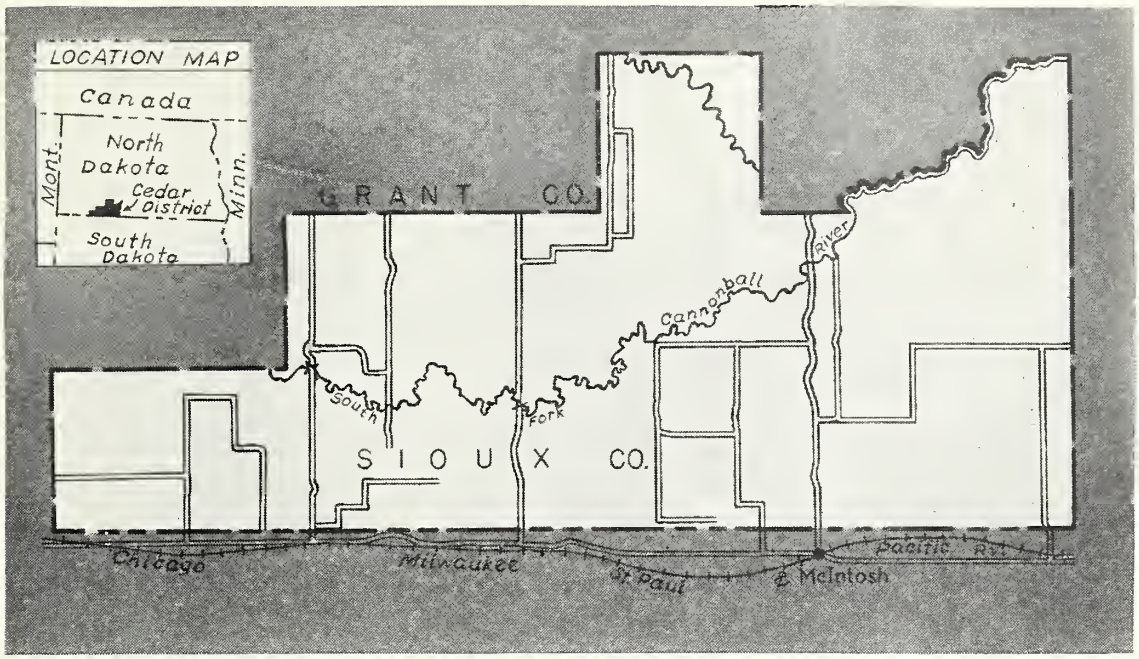

FIGURE 4.—The Cedar Soil Conservation District.

that farmers should get out of cropping as soon as possible and build up their livestock herds to a size that will support a family (fig. 5). But experience has shown that farmers cannot increase the size of their herds or use the range properly until they can get control of more land for a longer period of time than the customary 1 year leasing system provides.

Speaking of this need, Dan Perkins, one of the supervisors of the district, said:

"We need to be able to lease or buy sufficient land in the form of a close-knit, integrated unit. As it now is there are too many small holdings widely scattered and inefficiently operated. A man's ranch should be more or less, one complete, compact unit that he can figure on operating year after year. We have to lease too much land on 1-year leases. This discourages building reservoirs, deferring grazing, and otherwise improving the land. If we improve the land, then the rental price goes up the next year. What we need is some arrangement that will allow us to lease land for at least 10 years."

One can only understand the leasing problem by examining the ownership pattern in the area. And this is not a fixed pattern by any means. The county commissioners in 1939 had about 45,000 acres of tax-reverted land on their hands. Previously, much of the land had been sold and reverted. It happened in this way. For a small down payment a man could buy a tract of land and use it 3 years before it could be reclaimed by the county because of delinquent taxes or payment on the principal. Some other man came along and made another down payment. Three years later the land again came back to the county. This cycle was repeated over and over again on many tracts.

Along with the county there are other owners. Chief among these are the State, the Indians, the Federal Land Bank, and other corporations, as well as private individuals.

Before attempting to outline the preliminary steps the people have taken to attack their

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FIGURE 5.—Oliver M. Dahl, 33, who stands by the rusting plow abandoned by a former owner, bought this 320 acres on a quit-claim deed in 1937 for $1 and 1 tom turkey. At that time he purchased 7 cattle through a standard loan from the Farm Security Administration. He now has 45 head of high-grade cattle and, through the assistance of the district supervisors, he has 3½ additional sections of Indian- and county-owned land that he operates on a lease. The range is being improved through a complete plan of restoration and conservation. Mr. Dahl uses the 320 acres mostly for feed crops. He has a 2-year reserve supply of feed on hand. The Dahls have an irrigated garden in cooperation with the Ray Niel family one-fourth of a mile away.

problems, let us go back to the organization of the district (fig. 6).

In January 1938, Jim Maher, who later became chairman of the district board of supervisors, listened to several radio talks given over the Denver station by representatives of the Department of Agriculture. Some of these talks pertained to problems in his area, and some of them touched on the advantages of a soil conservation district. He sent for several of these radio manuscripts. When they arrived he drew a circle around those parts of the talks which seemed to offer some solution to the local problems.

Meanwhile, Zale Palmer, a member of the Sioux County Board of Commissioners, was trying desperately to find some way to take care of the county-owned land in a way that would make sense from a sound land use standpoint. By chance he saw a lawyer friend in Bismarck on one of his official trips to the State capital. The lawyer told Palmer that from a review of all laws and available written material, a soil conservation district appeared to offer the most practical help and at the same time would allow the local people full governing power and the authority of decision.

It did not take long for Jim Maher, Zale

Palmer, and other local men from Sioux and Grant Counties to look into the advantages and helps that a district might provide. They got in touch with their county agents and arranged for meetings to learn more about the possibilities of a district.

In these meetings the discussion in general centered around the following local problems:

1. Cropping of land suitable only to livestock production.
2. Too many small, economically unprofitable units.
3. An overgrazed and misused range potentially capable of providing enough forage for a good many livestock operators to derive a living.
4. The overdevelopment of roads, schools, and county government.
5. An area broken into many small units largely owned by mortgage holders or absentee owners, plus large tracts of tax-reverted land belonging to the counties.
6. How to proceed in an area best suited to livestock production in order to have it developed, valued, and taxed as such.

Farmers and ranchers saw the possibility of using the district mechanism as a solution to some of these problems. Petitions were circulated and the district was organized in September 1938.

Shortly after organization the newly elected

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FIGURE 6.—The Cedar Soil Conservation District board of supervisors and the secretary at work in their office, McIntosh, S. Dak. Left to right: S. K. Williamson; Zale Palmer, secretary; Jim Maher, chairman; and Dan Perkins.

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supervisors made arrangements for a meeting with representatives of the North Dakota Extension Service, the Soil Conservation Service, and other interested agencies to develop a program and work plan for the district. The Secretary of Agriculture signed a Memorandum of Understanding with the district in February 1939. The United States Department of Agriculture gives assistance to the district in accordance with this working arrangement.

Acting on the assumption that the size and permanency of operating units was the key to better land use the supervisors worked first of all with the county commissioners. The county commissioners had extensive acreages of land—about 45,000 acres—from which they were receiving no leasing revenue. Using their range-survey report as a guide, the supervisors figured closely and decided that they could offer the commissioners $4,000 for the county-owned land within the district if the county would lease the land for 10 years. This was in the spring of 1939. The county commissioners approved the plan and appointed Zale Palmer, one of their members who is also secretary of the board of supervisors of the district, to look after the county-owned land.

Now the real task began—that of blocking out desirable units and the collection of lease fees from a large number of individuals. In township and community meetings the supervisors told the stockmen that they could lease the county-owned land for 10 years if they would cooperate with the supervisors in developing units of sufficient size that an operator could make a living from the land. They said, in effect, to the local stockmen and farmers:

"Most of you do not have enough land that you can depend on for a period of years. Your district has some land under its control that can be leased. It will not be offered for sale for at least 10 years. We, as supervisors of your district, will approve units that seem to offer a reasonable possibility for security and permanence. It is possible to get some help from agencies like the Soil Conservation Service in developing watering places and determining the carrying capacity of the range, as well as recommendations for proper grazing management; but first of all you men must work together and agree on an equitable division of the land now under the control of our district."

Farmers who had sufficient money paid their lease fee in cash to the district supervisors. Most of the farmers, however, went to their local bank, either at McIntosh or Morristown and borrowed the money (fig. 7). When the supervisors had collected all the money for the leased units they turned it over to the county commissioners. It was the most money in lease payments that the commissioners had ever collected.

In the spring of 1940 the supervisors met with the Board of University and School Lands and worked out an arrangement for the leasing of 77 quarters of unleased school land for a period of 5 years. Although the separate tracts were leased to individual operators, the operation was handled in a cooperative manner so as to lease all the land, stabilize it in the proper units, and eliminate the detrimental effects of overbidding on key tracts. The rental price for the 5-year period was agreed upon after studying the range survey and other comparative data. The supervisors feel that, at least during the reorganization period, the present arrangement will be of material benefit to both the State Land Department and the individual operators.

This school land—12,320 acres—along with the land that reverted to the county through delinquent taxes—45,000 acres—now provides the supervisors with land under their control amounting to 57,320 acres.

Much of the progress in this district can be attributed to the cooperative attitude reflected by Tom, Dick, and Harry through their give-and-take spirit in developing those units. Yet the whole program would not have been brought about if the proposals had seemed unsound. And neither could the supervisors have obtained cooperation from the local banks

if the bankers had not fully understood and appreciated the program.

As these lines are being written the district has been in operation about 18 months. During this time the supervisors have received 294 applications for technical assistance from 120 operators who wished to plan their farm and ranch activities. The units operated by these applicants cover about 90 percent of the land in the district. This also includes lands under 1-year leases, a problem that has not been completely solved by the district. Conservation surveys have been completed on 170,726 acres, or about 56 percent of the district, and a range survey has been completed for the entire area.

Cooperative agreements have been entered into between 84 operators and the soil conservation district. These are complete working plans for the improvement of the range, the seeding of abandoned and formerly cultivated land to grass, the development of watering places, and other practical measures.

Dam-site surveys have been completed for 27 stock-water dams (fig. 8). Surveys and plans have been made for three individual irrigated tracts and for one community system. The Soil Conservation Service has furnished the district 27,281 pounds of grass and legume seed and 5,700 trees and shrubs to supplement the grass seed and trees furnished by the individual

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FIGURE 7.—Dan Perkins, like most of the other ranchers who cooperated with the district supervisors in enlarging and stabilizing their land holdings, borrowed money from his local bank to pay the lease fee for county-owned land within his unit. Mr. Perkins operates approximately 6 sections of land. He now has about 80 head of horses and cattle, mostly horses. He has plenty of feed, and he hopes to keep fewer horses and more cattle in the future.

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FIGURE 8.—A late December view of a stock-water dam on the Geary brothers ranch 30 miles northwest of McIntosh, S. Dak. This dam was designed by technicians of the Soil Conservation Service. The Geary brothers have another dam and a well with a tank at their headquarters. They keep about 700 sheep and 25 cattle.

cooperators. The Soil Conservation Service has also loaned a small tractor, one 10-foot single-disk drill, with press-wheel attachment for grass seeding, and two rotary fresnos for use in reservoir construction. The district supervisors rent the use of the tractor on a basis that will bring in enough revenue for maintenance and the purchase of a new one when the old one is worn out.

The Service has recommended, and the district has approved the eventual reseeding to grasses of 34,322 acres of abandoned and submarginal cropland. About 24 percent of this work has been planned and is now under way.

On July 23, 1939, the land operators were given the opportunity, as provided by law, to vote on land use regulations that would enable local operators to gain and maintain some control of the land. Ninety-nine operators voted on the regulations—94 voted for them, and 5 voted against them. The supervisors then enacted them. Thus the district drew up and passed by a decided majority the first land use ordinance in the northern Great Plains.

Following are the essential features embodied in these regulations:

> All livestock owners and/or operators within the boundaries of the Cedar Soil Conservation District must meet the grazing requirements as herein set forth. * * * When the actual carrying capacity of each individual grazing unit shall have been determined by the range examiner, this capacity shall thereafter apply. * * * The range examiner shall make periodic inspections of each unit and may raise the capacity if the unit is being under utilized or lower it if the unit is being over utilized.

If supplementary feed is used, the supervisors may lower the number of acres required per animal unit in proportion to the amount of feed used.

The supervisors shall have the power to authorize the range examiner to enter and survey any and all land within the district.

The supervisors shall have the right to count or cause to be counted for the purpose of determining compliance * * * the animal units grazing on any range unit.

* * * an application for a permit to enter must be filed with the * * * supervisors [and] * * * must state:

1. Number and kind of livestock.
2. Length of grazing season.
3. Legal description of grazing unit.
4. Proof of ownership or * * * right to use.

If the application shows sufficient acreage of range land to meet the grazing capacity requirements, and is approved by the supervisors, they shall issue a permit * * *.

When livestock are being driven to or from the land * * * they must be moved not less than five miles in the case of sheep, and ten miles in the case of cattle, each day (while on the District). In cases of unnecessary delay or willful trespass, the livestock shall be considered as being on the District without a permit.

If a herd of livestock is * * * without a permit * * * the owner shall be assessed a fine of 25 cents per animal unit per day * * *. If more livestock is brought into the District than is provided for in the permit, the owner shall be assessed a fine of 25 cents per day per animal unit in excess * * *. If a fine is assessed, the supervisors shall have the authority to seize and hold the herd * * * until settlement is made.

In general, livestock numbers have remained low since these ordinances were enacted into law. For that reason the supervisors feel that the overwhelming majority of farmers and ranchmen will voluntarily comply with the regulations so that no steps will be necessary to enforce complete compliance with the ordinances. It is true that some units are now overgrazed, but in most of these instances the operator, with the cooperation of the supervisors, has not yet been able to develop an adequate unit. Moreover, many of the stockmen say they will not want to overuse land now that their units are made more permanent through long-term leases and priority rights. Nevertheless, the supervisors feel that the ordinances will have considerable value in planning the size of the unit or the size of the herd.

To date the land use ordinance as it relates to permits for outside stockmen has accomplished its purpose without a contest. One permit was applied for and granted. Numerous other inquiries were made relative to requirements, but none were followed by applications. Here again, the educational program, which the supervisors and county agents pushed so completely in the organization of the district, bore fruit. "It is our hope," the supervisors wrote in their semiannual report, "to obtain continued compliance through education rather than to resort to the legal provisions of the ordinance."

Work Yet To Be Done

As hopeful and reassuring as has been the progress already made, the district has several urgent problems that are yet to be solved. Only a start has been made. For one thing, the supervisors feel that there is still much work to be done through the enlargement and stabilization of units. Too much land is still being leased without regard for its proper use.

The district supervisors recognize that it may be difficult to obtain control of certain "key" tracts. They are now working on a plan which they hope will lead to Government purchase of these tracts. They feel that the purchase of a few of these tracts, which they may lease, is essential and will enable them to block out several additional units on a more satisfactory basis. In one particular township, for example, there is a large body of grazing land in the middle of the area. On the other edge of this township are several pieces of privately owned land. These units are too small for efficient operation. Some of the owners of these lands are anxious to sell. If this land were purchased by the Government it could then be blocked out as a community pasture or leased in units of sufficient size to enable the remaining ranchers to operate successfully.

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FIGURE 9.—An abandoned schoolhouse in the Cedar Soil Conservation District. At one time between 20 and 25 children attended this school. The surrounding area was farmed then but not now.

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FIGURE 10.—Joe Chesrown put up 60 tons of hay in 1939 and 1940. He has other feed that he put up in 1938.

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FIGURE 11.—Through a Farm Security loan, Joe Chesrown, who lives 20 miles northwest of McIntosh, purchased these 26 head of cattle. The picture was taken the day after the cattle arrived at his ranch. Mr. Chesrown owns 2 sections and leases 1½ sections from the State School Land Department. Before these cattle came he had but 1 cow. Now he has grass, cattle, and a 3-year accumulation of feed. See fig. 10.

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FIGURE 12.—Much of the abandoned and submarginal cropland must be reseeded to grass. Here we see crested wheatgrass on the S. K. Williamson ranch, Grant County, N. Dak.

Equally important is the problem of institutional adjustments. Schools, roads, and other public facilities have been developed beyond the capacity of the community to support (fig. 9). With 75 percent of the land in the district suitable only for grazing it is clearly impossible for owners to pay high taxes. Unpaid taxes account for the fact that Sioux County is in debt up to the legal limit. It is evident to the supervisors that taxes and rental rates must be adjusted to and correlated with the productive capacity of the land.

During the last session of the North Dakota Legislature a law was passed making it possible to revalue land in relation to its producing capacity. In essence this bill provides for the revaluation of land if delinquent taxes are paid. Upon revaluation the taxes are cut almost in half. The supervisors are now busy in assembling information and data necessary to take full advantage of the new legislation. They are also holding meetings with local people to discuss provisions of the law.

The supervisors and the district face still another hurdle—that of credit. Range grasses over most of the area have made a heartening recovery and feed reserves are accumulating (fig. 10). Dams have been constructed, and water is much more widely distributed than formerly. Yet many of the operators, after losing all or most of their livestock during the disastrous years of the middle 1930's have not been able to rebuild their herds (fig. 11). The problem of securing credit to build up the herds is crucial. Most of the present types of private and governmental loans, the supervisors feel, do not adequately meet the requirements of the operators here. They are now holding numerous conferences with various local, State, and Federal lending agencies with the idea of making present credit facilities more effective for their local needs. They are also setting up a simple inexpensive legal procedure to secure tax deeds and quit titles.

While all of these activities reveal a measure of achievement for the people in the district they do not fully reflect the attitude that one feels in talking with the farmers and ranchmen living in the area. They frankly accept the fact that many mistakes were made in the past. They realize that their destiny in the area is bound up definitely with the production of grass, and they are willing to build a new economy on new practices that are not based on false premises (fig. 12). And while they have passed land use ordinances that enable them to cope with those who misuse the land, they rely principally on education and reasoning to attain their objectives.

In The Cotton South

Terre Rouge-Bodcaw District, Ark.

In 17 months (July 1939–December 1940, inclusive) the supervisors of the Terre Rouge-Bodcaw Soil Conservation District, southwestern Arkansas, developed conservation plans [1] on 964 farms that involved 134,344 acres (fig. 13).

But more important than the making of these plans is the fact that the following has actually been accomplished on the land: By January 1941, 5,257 acres of new terraces were under construction; 2,991 acres of pasture were sodded; 7,627 acres of cover crops were planted; 9,938 acres were farmed on the contour; 11,766 acres were in approved rotations; 18,015 acres of farm woodland were improved; and 3,145 rods of terrace outlet channels and 156 acres of meadow outlets were installed.

These figures take on added significance when they are considered in relation to the extent and severity of the soil problems in the district and the methods and means the supervisors used in getting their program under way.

[1] A new method of preparing farm plans is discussed by RULE, GLENN K., in WORKING PLANS FOR PERMANENT FARMS. U. S. Dept. Agr. Misc. Pub. 411, 41 pp., illus. 1940.

Soil Problems

First as to the size of the district. It contains about 1,020,000 acres, practically all of Hempstead and Nevada Counties and two-thirds of Lafayette County. Of this, approximately 610,183 acres is in farms; 402,317 acres is in large timber tracts, and the remaining 7,500 acres is included in lakes, streams, roads, and towns. Of the 610,183 acres in farms, approximately 310,000 acres is in cropland, which is a little less than one-third of the entire district (fig. 14).

When the word "cropland" is used with reference to this section of Arkansas, it usually means land in cotton. And this fact provides one of the keys—and perhaps the major key—

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FIGURE 13.—The board of supervisors for the Terre Rouge-Bodcaw Soil Conservation District meeting at their headquarters in Hope, Ark. In 17 months this board succeeded in developing conservation plans and getting work started on 964 farms within the district. Left to right: Homer Purtle, Prescott; H. B. Eley, McCaskill; R. B. McMurrough, Stamps; J. T. Adams, Sr., secretary, Laneburg; and Riley Lewallen, chairman, Hope.

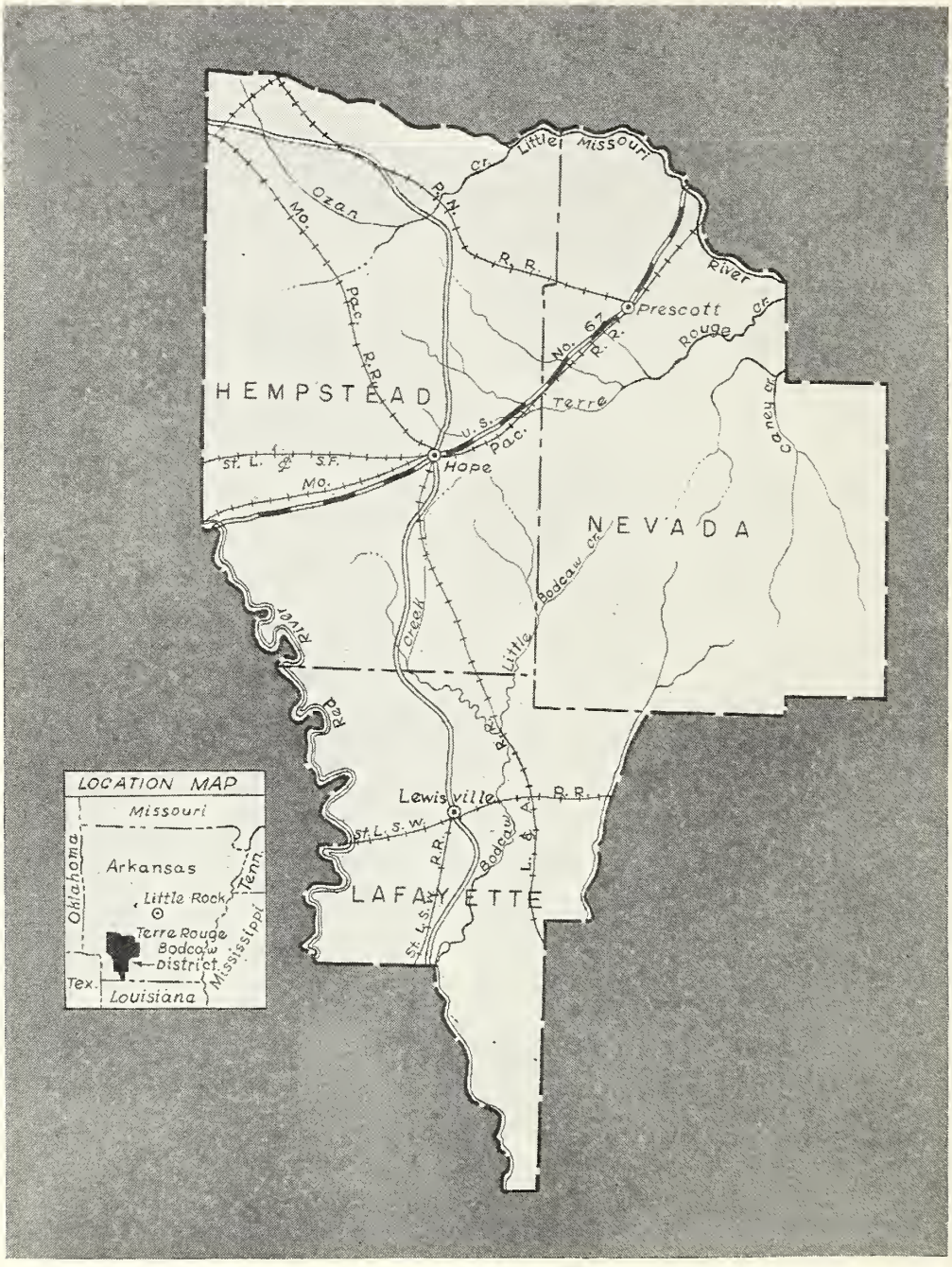

FIGURE 14.—The Terre Rouge-Bodcaw Soil Conservation District.

to the erosion problem. Cotton is a notoriously poor crop to protect soil against running water. While cotton now occupies less than a third of the acreage, at some time during the past practically every cultivated acre in the district grew this intertilled crop (fig. 15).

J. T. Adams, Laneburg, Ark., one of the supervisors, who is now in his early sixties, as a small boy saw the timber fall to make room to plant cotton. He saw cotton hauled 50 miles from his home farm to Camden to be shipped by raft down the Ouachita River where it was loaded on a flatboat to be taken to market.

Later he saw the Missouri Pacific R. R. push southward from St. Louis. This railroad and others hauled land-hungry settlers into and cotton out of the district. The cotton acreage rose steadily for about 35 years or until the boll weevil appeared in 1908. Then it fell abruptly and some farmers turned to truck crops and livestock, others abandoned large acreages that reverted to pine forests. These pine forests now stand guard over the remaining soil, but one can still find the old scars of gullies active when the land grew cotton (fig. 16).

High prices during and immediately after the World War again expanded the cotton acreage. But when prices tumbled after the war, most farmers again turned to livestock and truck farming as others did following the devastation wrought by the boll weevil in 1908. Some tried to make a living by "patch farming" on the best areas of the eroded fields.

In general, then, this was the situation—when cotton prospects were good, farmers cropped the open land to cotton and removed trees to make still more room for this cash crop. When prospects for cotton were poor, most of the farmers tried to increase their livestock or grow truck crops to derive some income. But inevitably when cash crop cotton again looked favorable the livestock, feed crops, and truck crops dwindled in importance.

On level land and with gentle rains some soils can withstand this sort of punishment. But here, where most of the land is sloping, where it is seldom protected by freezing weather, and where the annual average rainfall exceeds 50 inches, it was inevitable that soil losses should have been terrific.

When soil surveyors mapped the area following the organization of the district they found that from 25 to 100 percent of the original surface soil had been removed from the cultivated land. The average loss was about 50 percent.

Some farmers have given their soil better than average treatment. Yet on most farms, and despite better tillage, improved varieties, and increased fertilization, average yields have been going down. When cotton prices struck bottom in the early 1930's, most farmers could not buy fertilizer and times were extremely hard. As long as cotton brought 11, 12, or 13 cents a pound many of the farmers could buy fertilizer and keep their yields from declining disastrously low.

On many of the cropped out and eroded farms even fertilization is not a complete solution. In 1930 Nevada County used around 1,100 tons of fertilizer. Yet practically the only farmers who got a crop during that dry year were those who had grown peas or vetch the previous year. Others saw their crops burn because of too much fertilizer. "So," as a former county agent of this county said, "the increased use of fertilizer does not help to solve our problem unless the soil contains sufficient organic matter to hold moisture."

Here, as elsewhere in many parts of the South, tenancy and related problems face the district supervisors. About 63 percent of the farms in the district are operated by tenants. At least 1,000 farm families in Hempstead County do not have a single milk cow. The lack of cows throughout the district to supply sufficient milk for the local people is an answer, the supervisors feel, to the dairy communities elsewhere that are apprehensive lest surplus milk will soon flow from the land of cotton.

It may be said in brief that the supervisors are working for more livestock, and more grass, grain, and legumes to feed the livestock. But

they know this cannot be done if they let the soil, that makes meat and milk, run out from under them with each hard rain. All this calls for a farm-to-farm program of improvements in cultural methods on the land.

As elsewhere in the South a few farmers have made individual efforts to protect and improve their lands, but on the whole these individual efforts have been limited to some special line or practice. They have not resulted in that strong combination of mechanical and vegetal controls that experience has now proved to be necessary.

In the early 1920's H. B. Eley, one of the supervisors, began writing to his State college and to Washington for bulletins on terrace construction. He studied these bulletins and he bought a land level. In a few years he had most of his own land terraced and had helped many of his neighbors to lay out terrace lines. Today Eley points out many of these terraced fields in his own neighborhood. He frankly admits that he gave some of the terraces too much fall and others failed, he says, because proper outlets were not provided before water was discharged into them.

While Mr. Eley is convinced that properly constructed terraces are needed on land under cultivation to clean-tilled row crops, he now insists that terraced fields must be farmed on the contour and that row crops must be grown in

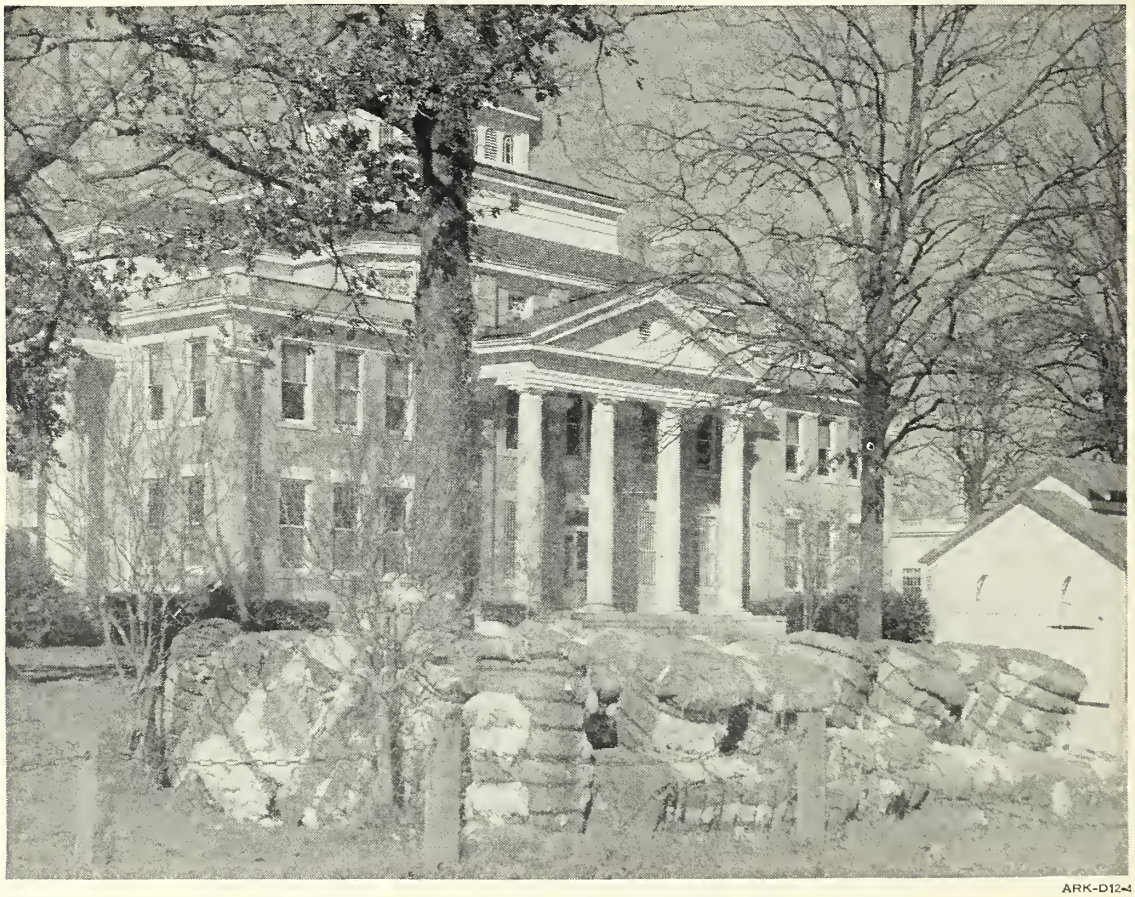

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FIGURE 15.—Cotton bales stacked in the courtyard of Nevada County Court House. Practically every cultivated acre in the district once grew this intertilled crop.

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FIGURE 16.—Pine forests now stand guard over many acres that once grew cotton. This woods is on the farm of E. H. J. Garrett, Hope, Ark. Note the inexpensive terrace outlet that leads into the wooded area in the foreground.

rotation with grass, legumes, and small grains. On his own farm of 400 acres he plans to keep about 150 in cultivation and 250 in pasture.

Going to Work

Of course the five supervisors could not have developed plans on 964 farms in 17 months and succeeded in getting a creditable number of practices adopted without substantial aid from various sources. One of the chief aids was the fact that farmers were ready to make improvements on their land. It took little argument to convince most of them that they needed to depend less on cash crop cotton and more on livestock; that they needed crop rotations in which grasses, legumes, and grains would figure prominently. County agents and vocational agricultural teachers had been promoting this program for years.

The Arkansas Experiment Station has a branch station within the district. The answers to a wide variety of questions were available at this station (fig. 17). Moreover, the director of the station, George Ware, attended many community meetings with county agents and vocational teachers at which the district idea was explained to farmers.

There are other aids. The Farm Security Administration has urged its clients to adopt conservation practices. Many of these farmers have made complete farm plans as recommended by the supervisors of the district. The 500 farms

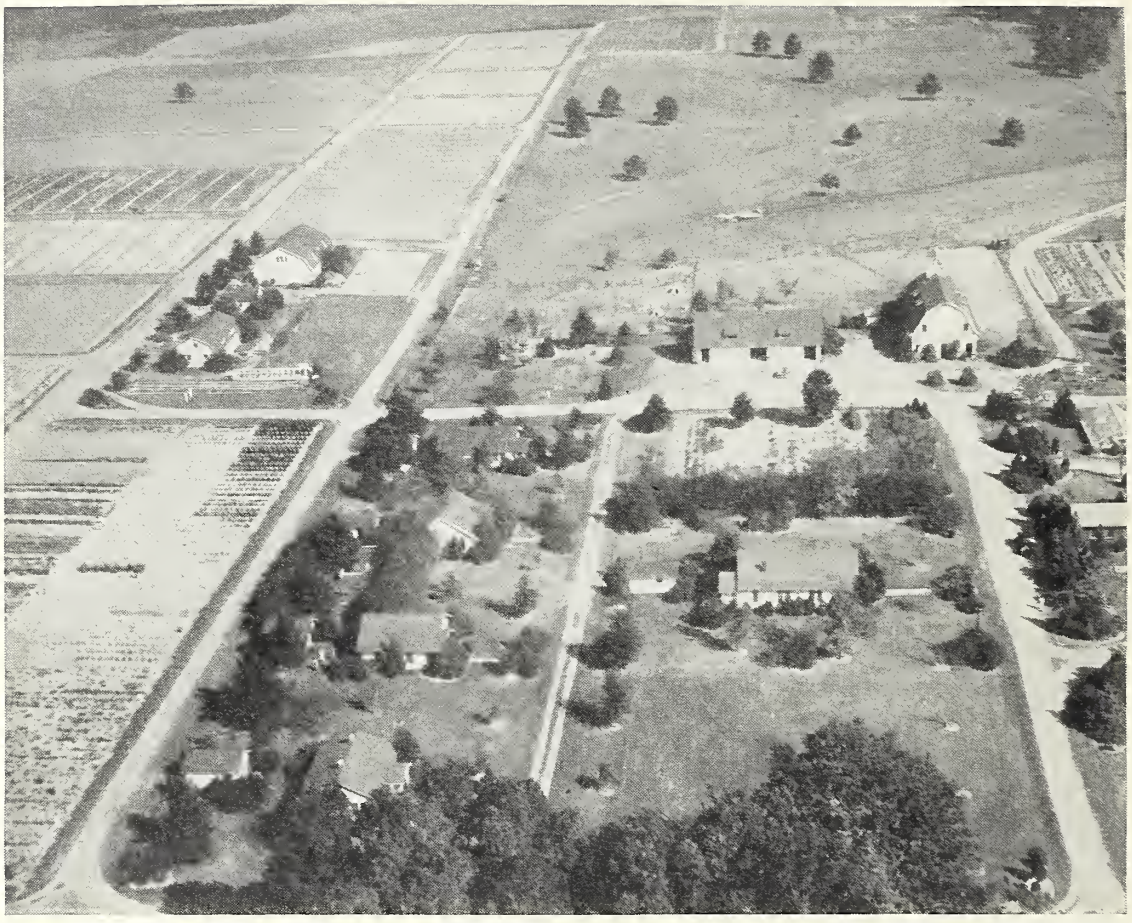

FIGURE 17.—An aerial view of the headquarters of the experiment station, Hope, Ark. A part of the 185 acres within the station can be seen in the background. It is estimated that 20,000 people visit this station annually to observe the results obtained through the numerous experiments. Located in the midst of their district, the board of supervisors can find the answer to many of their problems near at hand. *Courtesy Arkansas Agricultural Experimental Station.*

upon which a soil and water conservation program had been developed in the Hope and Magnolia Civilian Conservation Corps camp areas and the Hope soil conservation demonstration project gave convincing demonstrations of the coordinated use of the more modern practices.

The chairman of the board of supervisors, Riley Lewallen, is also chairman of the county Agricultural Adjustment Administration committee within his own county. His familiarity with the AAA provisions has enabled him to give unique aid in helping the farmers of the district obtain full benefit from the payments.

Even with all the aid indicated in the preceding paragraphs the supervisors could not have accomplished so much in so short a time without a definite and well-developed plan of procedure.

First of all, the supervisors divided the district into five zones—one for each supervisor. Each supervisor thinks of his zone as his particular responsibility.

Next, the supervisor selected three commun-

ities in his zone where he thought the district program should be set in motion. These communities are called priority areas. Each supervisor asked his own county agent to call a meeting in each of the three communities.

In these meetings they—the supervisor and county agent working together—told farmers what help would be available from the Soil Conservation Service, the local CCC camp, and other agencies. But more particularly they stressed what farmers themselves could do to speed the time when work could start on their own farms.

If a group of farmers is ready to plan their farms for conservation, they make application. This application is either approved or disapproved by the supervisor. If approved, arrangements are made for one of the technicians furnished to the district by the Soil Conservation Service to visit the farm and with the farmer develop a complete conservation plan. But the farm planner will not make a plan unless the farmer or his tenant is present (fig. 18).

Of course, many applications for assistance may come in from scattered farmers outside these communities or the initial priority areas. If such a farmer makes an application he is

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FIGURE 18.—Watson Tervillion (left), Hope, Ark., and the farm planner examine the completed plans for the Tervillion farm.

told that no work will be started until there are enough other farmers in his community so that farm planners and, later on, the work crews can work efficiently.

This was the experience of Charles Locke who lives near Ozan in Hempstead County. Mr. Eley, the supervisor, told Mr. Locke that in order to secure a plan on his farm as soon as possible, he should go back home and talk to his neighbors and get at least five other farmers interested. He did. Five other farmers joined Mr. Locke and made application for service on their farms. Mr. Eley requested that the Soil Conservation Service technicians make a plan for each farm in this group. This was done, and the plans were referred to Mr. Eley for his approval. This general method of determining where work is to be done is followed by all of the supervisors in their zones.

After the agreement for this farm was signed, Mr. Locke began preparing his land for sodding as soon as his crops were harvested, which was about 1 month after the plan was completed. During bad weather he cut posts for a new fence that was to enclose the pasture. When he had all of his fencing material ready and his ground prepared for sodding, he reported that he was ready for the crew at any time.

Mr. Locke and three of his neighbors were ready at the same time. As a result the work crews were on these farms about 6 weeks after the agreements were signed. By September the work planned on Mr. Locke's farm and on the three farms of his neighbors was practically completed.

The supervisors have developed an original plan in the handling of CCC camp labor and in securing the cooperation of farm operators to get the work done on the land. After a work area is established and farm plans are written the supervisor appoints one of the farmers as his official representative in the community (fig. 19). This local leader has several specific duties. He presides at the neighborhood meetings of farmers who have had their farms planned, he is responsible for the routing of equipment in possession of the district from one farm to another, and he collects the maintenance fee the supervisors charge for the use of the equipment.

Let us assume that a CCC work crew is available for a certain community where farm plans have been completed. The supervisor in the zone or area asks the local leader to call a meeting of the neighboring cooperators. This gathering of farmers is usually called an "execution meeting." But Mr. Eley, one of the supervisors, prefers to call it a "work meeting."

This work meeting is held approximately 10 days before a work period begins. Each farmer is urged to bring his farm plan to the meeting. And each farmer or his representative is required to be present if he expects to get help from the camp crew. No speeches are made at these work meetings. The leader of the group asks each farmer how much work and what kind he will be prepared to use on his farm when the crew arrives. For example, a particular farmer may have a terrace outlet that needs sodding. He is instructed to have his land plowed and sod on hand ready for the crew to begin after their arrival. Other farmers may need terrace lines run. The leader of the group assembles this information for the CCC superintendent and the foreman of the work crew. The foreman visits each farm to determine the number of men that will be needed for a particular job.

While these meetings are called primarily to make arrangements for work crews, they have proved valuable in other respects. Occasionally the group decides to visit a farm in a nearby area where conservation measures can be observed. More frequently the individuals within the group are encouraged to do those things in the program that do not require labor or technical assistance from their district.

The supervisors feel that certain times of the year are more appropriate for making plans on farms than others, and they also feel that work can be done on the farm at certain seasons to greater advantage than at others. For example, they think of the period between April 1 and

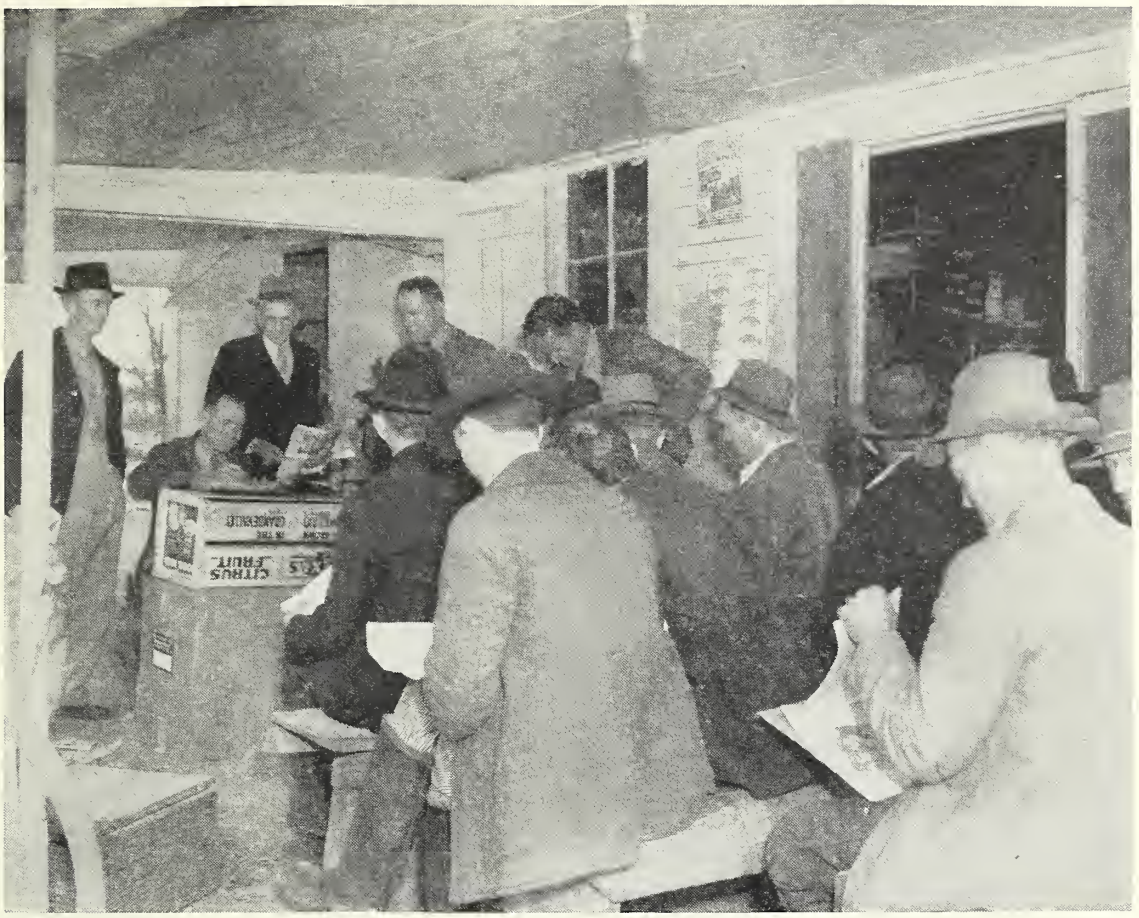

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FIGURE 19.—Fourteen farm owners are attending a "work" meeting at the post office and general store, Bodcaw, Ark. Seated at the improvised table is the labor foreman for the local CCC. J. B. Silvey, the community leader in charge of the meeting, stands second from the left.

October 1 as the best time for the writing of farm plans. They will, of course, give help to a farmer during this period to establish conservation practices if he can spare the time from his crops, but ordinarily at such times such aid is held to a minimum—just enough to keep CCC boys productively employed.

October and November are good months to get conservation work done. Farmers can and will use their time and machinery during this period to establish conservation practices. Some farm plans are made during this period, but not at the expense of delaying work on the land.

December and January are usually cold and rainy months. Some trees may be planted but most farmers will agree with the supervisors that these months are most appropriate for planning. But from February 1 to the middle of April farmers need the help of all the technicians to start farming operations on the conservation plan. Some terraces must be finished, strip crops are to be planted, and land retired to pasture must be prepared for sodding. Of course, plans can be written during this period but it is definitely a time for action on the land.

By using such a plan the supervisors were able

to distribute the available CCC labor over many farms rather than having it concentrate on a few. CCC crews worked on 132 farms in 1 month.

By the close of the year 1940 the supervisors had developed a project in cooperation with the WPA. Work had already been started in two areas of the district with 75 men helping to establish conservation practices on farms under agreement with the district. In January 1941, work was started in another part of the district with 25 additional men.

Since the supervisors have succeeded in developing plans for an immense amount of work on individual farms they have been able to lay the groundwork for a "conservation materials and service" program with the AAA for the construction of terraces during 1941. This service would be available to farmers who desire to have their terraces built under contract.

As good a beginning as the supervisors and farmers in this district have made they realize that they have only started. The work performed within the district by cooperating farmers in the Hope demonstration area, and the farms upon which the CCC boys worked from their camp at Magnolia, provide a "yardstick" for estimating the amount of work that should be done in the entire district. On this basis the supervisors estimate that 300,000 acres should be in approved rotations and tilled on the con-

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FIGURE 20.—Potatoes growing in a contour strip on the farm of J. M. Fuller, Hope, Ark. The supervisors estimate that 200,000 of the 310,000 acres in cropland within the district should be farmed in strips and on the contour. At the end of the crop year in 1940 there were 9,000 acres in strip crops.

tour (fig. 20); 200,000 acres should be in strip crops; 180,000 acres should be terraced; 4,660 acres should be retired to trees and wildlife cover; 27,340 acres should be sodded for hay and pasture, and 459,000 acres of woodland should be under improved management. They also estimate that they will need 1,000 miles of diversion terraces; 540 miles of permanent waterways; 600 stock ponds and reservoirs; to say nothing about the thousands of rods of fencing to be removed, to be newly built, or relocated.

This publication has tried to indicate how the district idea works out as it moves from theory to practice, from paper to the land. Many of the other districts show as much progress as is here revealed in the two examples. When a considerable number of the recently organized districts can get into action, in full stride, we shall be immeasurably nearer the day when the forces of repair strike a balance with the forces of destruction.

Additional information on soil conservation districts is available from your county agricultural agent. Information is also available from a number of other sources including the State Soil Conservation Committee; the College of Agriculture; the regional office of the Soil Conservation Service and the United States Department of Agriculture.

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